

REMARKS

Entry of the foregoing, re-examination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. § 1.111, and in light of the remarks which follow, are respectfully requested.

The Abstract has been amended to further improve its form. Claim 25 has been amended to recite polymerizing condition "in the absence of a thermo-initiator." This amendment is supported by the disclosure, for example, page 11, lines 19-34. In addition, claims 29 and 31 have been amended to delete the phrase "or issued from a compound having a reactive double bond." Further, claim 32 has been amended to further recite a cooling step. This amendment is supported by the disclosure, for example, page 3, lines 6-10. Claims 26, 27, 33, 37, 39 and 43-45 have been amended to further improve their form, which does not narrow the scope of the claims. Furthermore, claims 34 and 36 have been canceled without prejudice or disclaimer. Claims 1-24 were previously canceled. No new matter has been added.

Upon entry of the Amendment, claims 25-33, 35 and 37-45 will be all the claims pending in the application.

I. Drawing

The Office Action is silent regarding the drawing (1 sheet) submitted February 1, 2006. The Examiner is respectfully requested to acknowledge acceptance of the drawing in the next PTO communication.

II. Response to Objection to the Abstract

The abstract was objected to for the use of terminology "said."

In the Amendment, Applicants have amended the abstract to replace "said" with --the--. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the objection.

III. Response to Objection to the Claims

Claims 29, 31, 34 and 36 were objected to for allegedly being of improper dependent form.

In the Amendment, claims 29 and 31 have been amended to delete the objected-to phrase "or issued from a compound having a reactive double bond." In addition, claims 34 and 36 have been canceled. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the objection to the claims.

IV. Response to Rejection under 35 U.S.C. § 112, Second Paragraph

Claim 32 was rejected under 35 U.S.C. § 112, second paragraph, for allegedly lacking antecedent basis.

In the Amendment, claim 32 has been amended to further recite a cooling step. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the § 112, second paragraph, rejection.

V. Response to Rejection under 35 U.S.C. § 103(a)

Claims 25-45 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 6,063,883 to Besner et al. in view of U.S. Patent No. 4,303,705 to Kelso. Applicants respectfully submit that the claims as amended are patentable over Besner et al. in view of Kelso for at least the following reasons.

Independent claim 25 recites a process for the treatment of wooden elements, the process comprising the following steps: a) conditioning the wooden elements to reduce their moisture content; and b) performing one of the following sequences of steps selected from the group consisting of at least the sequence of steps b1) to b4) or at least the sequence of steps bb1) to bb2); the sequence of step b1) to b4) at least comprising: b1) impregnating the wooden elements obtained from step a) with at least one wood preservative, b2) heating the wooden elements obtained from step b1) at a temperature of at least 51° C to fix the wood preservative(s) in the wooden elements, b3) impregnating the wooden elements obtained from step b2) with a solution comprising polymerizable reactive groups, identical or different, that can form a polymer under polymerizing condition in the absence of a thermo-initiator, and b4) subjecting the wooden elements obtained from step b3) to polymerizing condition in the absence of a thermoinitiator to polymerize the reactive group(s); said sequence of steps bb1) to bb2) at least comprising: bb1) impregnating the wooden elements obtained from step a) with a mixture of at least one wood preservative and polymerizable reactive groups, identical or different, that can form a polymer under polymerizing condition in the absence of a thermo-initiator, and bb1) heating the wooden elements obtained from step bb2) in the absence of a thermo-initiator at a temperature of at least 51° C to fix the wood preservative(s) and to polymerize the reactive groups.

As described on page 11, lines 19 to 29 of the present specification, "the absence of a thermo-initiator (polymerization initiator) in the process results in a reduction of the instability of the crosslinkable polymer solution, this simultaneously results in an ability to reduce the concentration of CCA [Chromated Copper Arsenate] (used as a polymerization inhibitor) from 0.5%, to a range from 0.04 to 0.12% in a two impregnation step treatment. The elimination of sodium persulfate (used as a thermo-initiator) reduces the corrosivity

(ability to generate corrosion) and conductivity of the final product, since there is no more sulfate ions originating from said thermo-initiator. For some specific application, the conductivity as well as the corrosivity may reduce the useful lifetime of equipments attached to the treated wood elements, represent important features of the process. Such phenomena of conductivity and corrosivity were observed in the prior art process, especially processes using potassium persulfate. However, these drawbacks are avoided or minimized with a process according to the invention.”

The specification continues to state that “the elimination of the thermo-initiator (polymerization initiator) reduces the kinetic of the polymerization reaction, allowing a favorable phenomenon to take place, such as the diffusion of DM-PEG [dimethacrylate polyethylene glycol] molecules to the surface of the poles during drying of the wooden elements and to simultaneously result in an increase of the DM-PEG content, where requested” (page 11, lines 31 to 34).

Besner et al. discloses that a wood article is submitted to a vacuum in an autoclave to remove air that it contains. Then, a solution which contains a water-soluble cross-linkable prepolymer, a polymerization initiator and optionally a wood preservative are introduced into the autoclave. Polymerization to form a polymeric network in the wood article is carried out in an atmosphere which may be substantially free of oxygen, while the optionally present preservative is chemically fixed to the wood (Abstract). That is, in the process of Besner et al., polymerization is carried out in the presence of a polymerization initiator. Besner et al., does not disclose a polymerization step carried out in the absence of a polymerization initiator, as recited in present claim 1, or the above noted effects obtainable therefrom.

Kelso discloses a process for the treatment of wood in which water-borne wood treatment materials, such as CCA salts, are forced into the wood under pressure and the

water-borne wood treatment materials are held within the wood under pressure until they are deposited by precipitation or chemical affixation (Abstract). As Kelso does not rectify the above noted deficiencies of Besner et al., the combination of Besner et al. and Kelso still would not result in the subject matter of claim 25.

In view of the foregoing, Applicants respectfully submit that claim 25 is patentable over Besner et al. in view of Kelso, and thus the rejection should be withdrawn.

Additionally, claims 26-33, 35 and 37-45 depend from claim 25, directly or indirectly, and thus are patentable over the cited references at least by virtue of their dependency.

VI. Conclusion

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at his earliest convenience.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: March 31, 2009

By: _____



Fang Liu, Ph.D.

Registration No. 51283

P.O. Box 1404
Alexandria, VA 22313-1404
703 836 6620